

WHAT IS CLAIMED IS:

1. An inkjet printing apparatus having plural full-line type inkjet printheads each having an array of printing elements corresponding to a width of a print medium, comprising:

control means for, when print data is received, simultaneously performing print-output of said print data by said printhead within a printing area of said print medium and preliminary discharge from said 10 printhead without said printing area of said print medium;

driving electric-power calculation means for calculating driving electric power to simultaneously perform said print-output of said print data and said 15 preliminary discharge, by a predetermined length in a conveyance direction of said print medium; and

determination means for determining whether or not said calculated driving electric power is greater than a threshold value indicating an upper limit of 20 driving electric power to simultaneously perform said print-output of the print data and said preliminary discharge,

wherein if said calculated driving electric power is greater than said threshold value, said control 25 means reduces electric power supplied to said printhead to a value less than said threshold value.

2. The inkjet printing apparatus according to claim 1, wherein if said calculated driving electric power is greater than said threshold value, said control means changes a driving frequency to said printhead.

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3. The inkjet printing apparatus according to claim 2, wherein said threshold value is a value obtained by subtracting electric power necessary for said preliminary discharge from a maximum value of electric power which can be supplied from a power source to said printhead.

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4. The inkjet printing apparatus according to claim 1, further comprising preliminary discharge pattern selection means for selecting a predetermined preliminary discharge pattern from a previously set preliminary discharge pattern table.

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5. The inkjet printing apparatus according to claim 4, wherein a value of electric power necessary for said preliminary discharge is set for said preliminary discharge pattern and stored in said preliminary discharge pattern table.

6. The inkjet printing apparatus according to claim 2, further comprising driving frequency selection means

for selecting a predetermined driving frequency from a previously set driving frequency table.

7. The inkjet printing apparatus according to claim 5, wherein said control means controls said driving frequency selection means to select a driving frequency to obtain driving electric power less than said threshold value from said driving frequency table.
- 10 8. The inkjet printing apparatus according to claim 1, wherein said printhead discharges ink by utilizing thermal energy and has thermal energy transducers for generating thermal energy to be applied to the ink.
- 15 9. A driving control method for an inkjet printing apparatus having plural full-line type inkjet printheads each having an array of printing elements corresponding to a width of a print medium, comprising:  
a control step of, when print data is received,  
20 simultaneously performing print-output of said print data by said printhead within a printing area of said print medium and preliminary discharge from said printhead without said printing area of said print medium;
- 25 a driving electric-power calculation step of calculating driving electric power to simultaneously perform said print-output of said print data and said

preliminary discharge, by a predetermined length in a conveyance direction of said print medium; and

- a determination step of determining whether or not said calculated driving electric power is greater than a threshold value indicating an upper limit of driving electric power to simultaneously perform said print-output of the print data and said preliminary discharge,

wherein at said control step, if said calculated driving electric power is greater than said threshold value, electric power supplied to said printhead is reduced to a value less than said threshold value.

10. A control program for controlling driving of an inkjet printing apparatus having plural full-line type inkjet printheads each having an array of printing elements corresponding to a width of a print medium, comprising:

a control step of, when print data is received, simultaneously performing print-output of said print data by said printhead within a printing area of said print medium and preliminary discharge from said printhead without said printing area of said print medium;

25 a driving electric-power calculation step of calculating driving electric power to simultaneously perform said print-output of said print data and said

preliminary discharge, by a predetermined length in a conveyance direction of said print medium; and

a determination step of determining whether or not said calculated driving electric power is greater than a threshold value indicating an upper limit of driving electric power to simultaneously perform said print-output of the print data and said preliminary discharge,

wherein at said control step, if said calculated driving electric power is greater than said threshold value, electric power supplied to said printhead is reduced to a value less than said threshold value.

11. A computer-readable storage medium holding a control program for controlling driving of an inkjet printing apparatus having plural full-line type inkjet printheads each having an array of printing elements corresponding to a width of a print medium,

wherein said control program comprising:  
20 a control step of, when print data is received, simultaneously performing print-output of said print data by said printhead within a printing area of said print medium and preliminary discharge from said printhead without said printing area of said print medium;

a driving electric-power calculation step of calculating driving electric power to simultaneously

perform said print-output of said print data and said preliminary discharge, by a predetermined length in a conveyance direction of said print medium; and

a determination step of determining whether or

5 not said calculated driving electric power is greater than a threshold value indicating an upper limit of driving electric power to simultaneously perform said print-output of the print data and said preliminary discharge,

10 wherein at said control step, if said calculated driving electric power is greater than said threshold value, electric power supplied to said printhead is reduced to a value less than said threshold value.